

Computational Mathematics

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Week 1

Exercises

1) Given $f(x) = -x^2 + 6x - 11$

a) $f(2)$

b) $f(-10)$

c) $f(t)$

d) $f(t - 3)$

e) $f(x - 3)$

f) $f(4x - 1)$

2) Determine all roots of $f(t) = 9t^3 - 18t^2 + 6t$

3) Given $f(x) = 3x^2 - x + 10$ and $g(x) = 1 - 20x$
find each of the following.

a) $(f \circ g)(5)$

b) $(f \circ g)(x)$

c) $(g \circ f)(x)$

d) $(g \circ g)(x)$

4) Given $f(x) = 3x - 2$ find $f^{-1}(x)$

5) Given $g(x) = \sqrt{x - 3}$ find $g^{-1}(x)$

6) Given $h(x) = \frac{x+4}{2x-5}$ find $h^{-1}(x)$